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Session IV-17

Perfluorinated compounds in fish and carryover from fishfeed to farmed rainbow trout

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Perfluorooctanesulfonate (PFOS) and perfluorooctanoate (PFOA) bioaccumulate in humans and the half-life is around 4-6 years. As fish for many people is the largest source of PFOS exposure, the occurrence and the exposure of PFOS from fish was estimated. Today a significant proportion of the fish consumption is from aquaculture produce (~40% of the world's fisheries (FAO 2012)). Hence the carryover of PFOS and PFOA from aquaculture feed to fish was studied.
In 2011 and 2012 fish were collected from Danish catching areas in the Baltic Sea and the North Sea and from Danish aquaculture farms and analysed for PFOS and PFOA.
The impact of chemical exposure on the cause in a feeding trial with rainbow trout (*Oncorhynchus mykiss*) accumulation and elimination of PFOS and PFOA was studied. PFOS was added to the fish feed at a level of 3 µg/g and PFOA at 0.5 µg/g. The fish were fed with the contaminated fish feed in an accumulation period of 12 weeks following an 8 weeks elimination period where unspiked feed were used. The feeding trials were carried out in tanks and the experiment included a control study of fish which were exposed only to unspiked feed. All feeding trials were conducted in duplicates. Fish were sampled 5 times during accumulation and 6 times during elimination. Analysis of PFOS and PFOA were performed on trout filet and liver.